

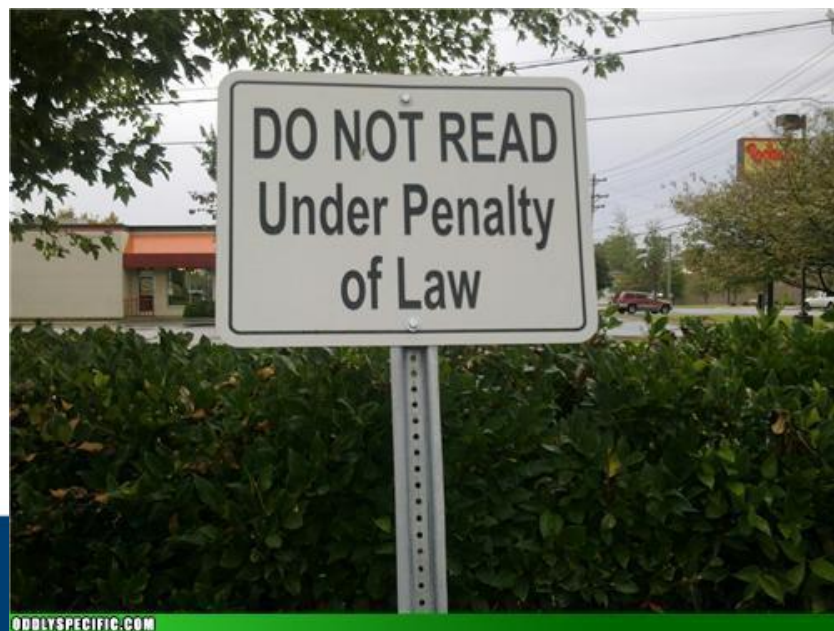
Psychology of persuasion and scam compliance

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The outline

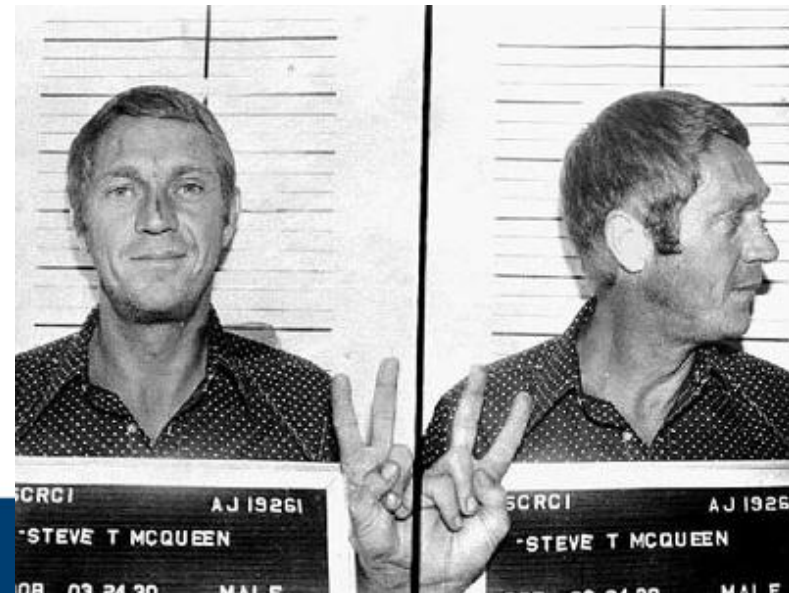
- Internet fraud – history and postulates.
- General victimological data.
- Psychological mechanisms.
- Who is vulnerable to scams?
- How to abolish scams.



Ancient history and origins

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- *Fraudem* (Latin) – to cause deceit or injury.
- *Scam* – Probably first used by actor Steve McQueen in 1963 in a Time Magazine interview.
- Long history – Spanish prisoner letters in 16th Century.



Definitions and conditions

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- *Scam compliance.* To comply with fraudulent requests.
- Staged process. *Plausibility -> Response -> Loss.*
- Marketing theory. *An illegal marketing offer.*
- Compliance across different categories of Internet fraud is influenced by different mechanisms of persuasion.



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But why psychology?

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Why would it make sense to look at people?

Because of *victim facilitation*.

Online fraud is well suited to victim facilitation.

It would thus be logical that some people are more likely to comply, depending on what kind of person they are.

AHA! Psychology.



General overview of the Landscape

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- **N** = 6609
- **DV**: scam compliance with Internet fraud (four levels: 1 - not compliant, 2 - found Plausible, 3 - Responded, 4 - Lost).
- Ten types of fraud: *accommodation; advance fee; auction fraud; boiler room; fake goods; hijack; ID theft; lonely hearts; lottery; pyramid.*
- **Method**: Self-reported survey, advertised on the BBC.



Overview - results

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Overall Compliance rates

- N/Compliant 52.9% (n = 3467)
- Plausible **94.8%** (n = 6268)
- Responded 25.5% (n = 1683)
- Lost utility 22.1% (n = 1459)

Highest compliance rates:

- Plausible: C. Hijack (76% / sample)
- Responded: ID Theft (11% / sample)
- Lost Utility: Auction Fraud (5% / smp.)

← Article from World Net Daily

Playing with fire

Published by June Swenson June 3rd, 2008 in Abstinence.

When you play with fire, there is a 50/50 chance something will go wrong, and nine times out of ten it does.

- Personality traits and scam compliance:
 - **General compliance:** (IPIP; Modic & Lea, 2012): Extraversion (+), Openness (-), Premeditation (-)
 - **Auction Fraud:** (HEXACO; Modic & Anderson, 2015): No domain significant, but a number of sub-domains significant. See next slide.

Victim personality

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Logistic Regression Model for Personality Traits Influencing the Transition From Responding to Buying (n = 78)

	B	S.E.	Exp(B)	Wald
<i>HEXACO</i>				
Modesty (HON)	1.812	0.588	6.12	9.500**
Social Self Esteem (EXTR)	1.028	0.585	2.795	3.083*
Sociability (EXTR)	-1.193	0.507	0.303	5.540**
Gentleness (AGRE)	1.717	0.634	5.57	7.327**
Flexibility (AGRE)	-2.034	0.801	0.131	6.440**
Organization (CONSCI)	1.592	0.579	4.916	7.553**
Diligence (CONSCI)	-1.497	0.599	0.224	6.240**
Aesthetic Apprecia. (OPE)	-1.064	0.494	0.345	4.640**
Creativity (OPE)	1.762	0.605	5.826	8.482**
<i>UPPS-IBS</i>				
Premeditation	-2.197	0.797	0.111	7.601**
Sensation Seeking	0.737	0.434	2.089	2.881*

Note. * p < .1, ** p < .05, *** p < .001

NONE of the HEXACO domains was statistically significant as a full construct.

Personality and fraud (auction, respond -> lose)

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- A number of sub-domains are inversely correlated: (e.g.
 - Extraversion: + Social Self Esteem vs. – Sociability
 - Agreeableness: + Gentleness vs. – Flexibility
 - Take-away message. *Whole domains are not good predictors of compliance, because it is more fine-grained.*
- Ability to Premeditate was again statistically significant.
- **Note that most people who respond, also lose. Finding individual differences between ‘responders’ and ‘losers’ is significant. Because it can save people from real struggles (both emotional and financial).**

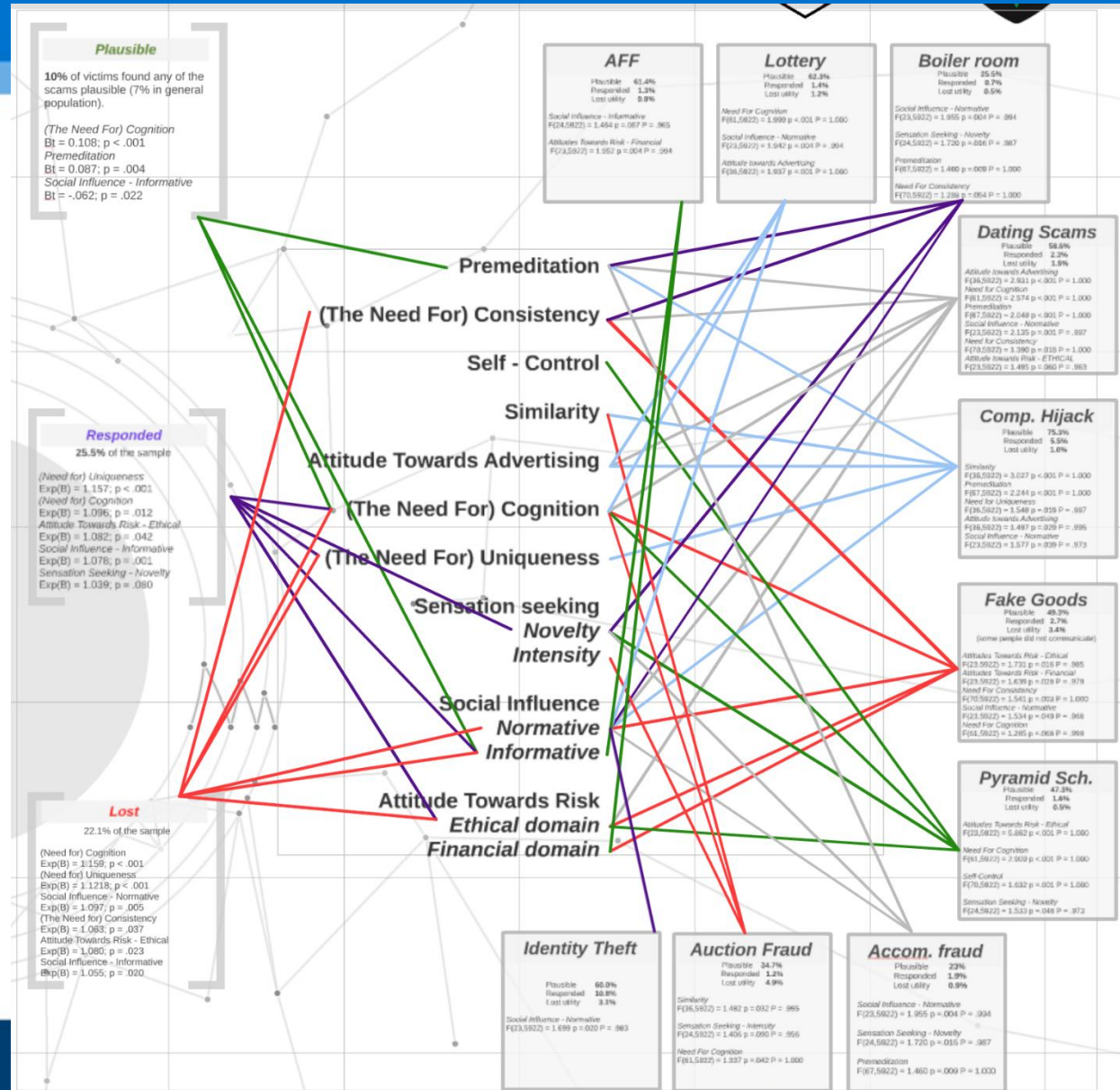
Susceptibility to Persuasion - II (foundation)

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- Falling for scams is not a rational behavior. And acting irrationally is stupid, right?
- Right?
- But intelligence is not a salient regressor in compliance (Modic & Lea, 2011; Modic, 2012).
- Thus, there are mechanisms in play that make perfectly rational individuals act irrationally.
- Enter Susceptibility to Persuasion – II scale (StP-II; Modic, Palomaki & Anderson, 2015), that measures susceptibility to those mechanisms.
- 10 domains, with 6 subdomains. *Measures*: Ability to Premeditate, (Need for) Consistency, Self - Control, Need for Similarity, Att. towards Advertising, (Need for) Cognition, (Need for) Uniqueness, Sensation seeking (Novelty, Intensity), Social Influence (Normative, Informative), Attitudes tow. Risk (Ethical domain, Financial domain).

StP-II Application

- n = 6609
- 10 types of Internet Fraud.
- StP-II (54 items)
- At least one significant regressor in any category of fraud.
- All StP-II mechanisms salient in at least one type of fraud.



Mechanisms of scam compliance

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- In general, regardless of the type of fraud, individuals are more likely to **respond**:
 - If the scam makes sense (i.e. Need for Cognition).
 - If it is something *unique* or *novel* (i.e. sensation seeking – Novelty and Need for Uniqueness).
 - It should appear to be something that our peer group thinks is a good option (i.e. Social Influence – Informative).



Mechanisms of scam compliance II.

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- In order for an individual to lose utility the scammers need to push for:
 - Need for Cognition, Need for Uniqueness and Social Influence – Informative (the *respond* categories).
 - Invoking the need for Consistency, i.e. *“You just need to act as you have always done. Just be consistent. If you bought things online before, buy this from me in the same way.”* If you like to have things in order, you should also call your bank (or scammer) to sort out *the fictional debit card issue that occurred.*
 - Normative Social Influence. *Do what all your friends do!*

Financial Fraud (Boiler room scams)

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- *Compliance rates (Boiler room scams)*
 - *Plausible* 25.5%
 - *Responded* 0.7%
 - *Lost utility* **0.5% (n = 33)**
- *Compliance mechanisms (observed **Power** > .9):*
 - *Social influence (Normative)* **F = 1.955 p = .004**
 - *Sens. Seeking (Novelty)* **F = 1.720 p = .016**
 - *Premeditation* **F = 1.460 p = .009**
 - *Consistency* **F = 1.288 p = .054**

Note. Analysis of variance DV: Compliance 4L, IVs: StP-II

WHO ARE THE VICTIMS?

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Who is vulnerable to scams?

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- *Is it older people? Working class? Stay at home parents? Teenagers? Less Intelligent individuals?*
- It is all of those, but not for the apparent reasons.
- This has to do with context effects; and convenience.



What are context effects

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- We tend to do things differently depending on a situation. A few examples:
 - A man might not usually shave, but would shave for a job interview. So, the context of a job interview influences our regular behaviour.
 - People like the commercials in a show that they like, *better*, than in a show they don't like. So the context (the TV show) influences our attitudes/behaviour towards items being sold.
- *Using the Internet influences our behaviour. And the usage patterns depend on age, educational level, type of job, etc.*
- *We do not know whom to trust, we misjudge more easily because we are missing four out of five channels of communication. And we also trust by association.*

Convenience

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- It is possible to make oneself completely impervious to fraud.
- All one has to do is:
 - *Stop using any kind of electronic communication devices.*
 - *Do not do online banking. No banking at all is preferable.*
 - *Transact only face to face, only with well known people.*
 - *Avoid any communication and trust no one.*
- We do not do this. Because it is inconvenient and verging on impossible.

Convenience II.

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- So, victimisation becomes a game in *game theory* terms.
- There are trade-offs that increase our likelihood of being scammed, but at the same time decrease convenience (*online banking, eBay and Amazon, keeping in touch with friends and relatives...*).
- The question then becomes how to find the right balance between risk and convenience. And that is, of course, *hard*.

The balance

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- Things to do:
 - Be aware of what kinds of risks you are exposing yourself to.
 - Understand that sometimes losing utility is simply the operating cost.
 - Be aware of what mechanisms work in scam compliance and know how susceptible you are to them.



How to abolish scams?

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- We already established unrealistic ways of abolishing fraud.
- What about more realistic ones?
- The problems:
 - Non-working reputation systems.
 - Cultural effects (politeness, for example).
 - Issues of detection – *Pinocchio's nose*.



What can we do?

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- *Prevention*
 - The problem with prevention in general is that it does not work well (*Too non-targeted, goes against preferences*).
 - But. If we can show how our actions prevent us from achieving our goals, *that works*. For this, we need to know psychology of victims.
 - Frame fraud as game theoretic transaction (Win some, lose some).



What can we do?

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- Deterrence
 - Using the same techniques scammers use.
 - Offer other solutions to the problems potential victims face.
 - Explain clearly what is going on and what the possible end games are (re-victimisation, etc).
 - Discuss the illusions of superiority and optimism bias with (potential) victims.



Thank you!

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Nothing to see here. Go back one slide.

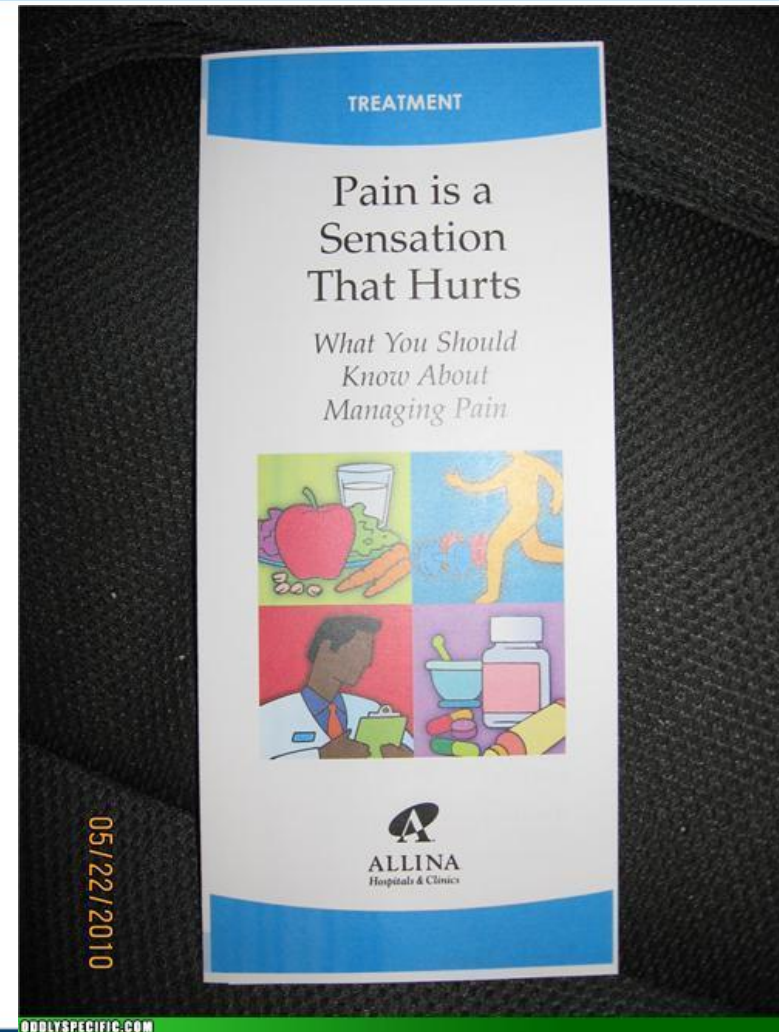
Addendum

- Impact of Fraud on the next slide

Emotional and Financial impact

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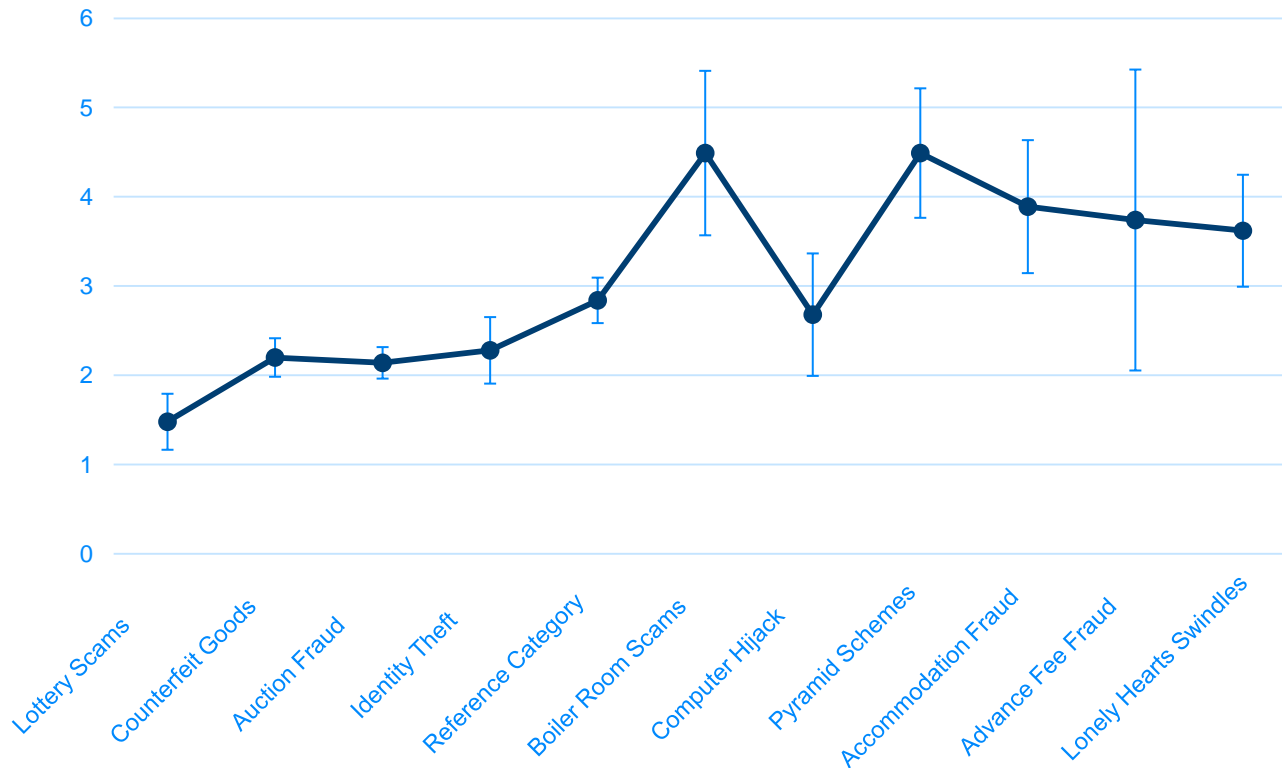
- Same study as before (n = 6609).
- Same categories of fraud.
- Two DV's (scales 1..10)
 - *[Paraphrase]* Considering how much money you made at the time, what was the financial impact?
 - *[Paraphrase]* What was the emotional impact?
- Asked those who lost only (n = 1366).



Corollaries II.

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- *Financial impact*



Highest reported financial Impact:
Pyramid schemes

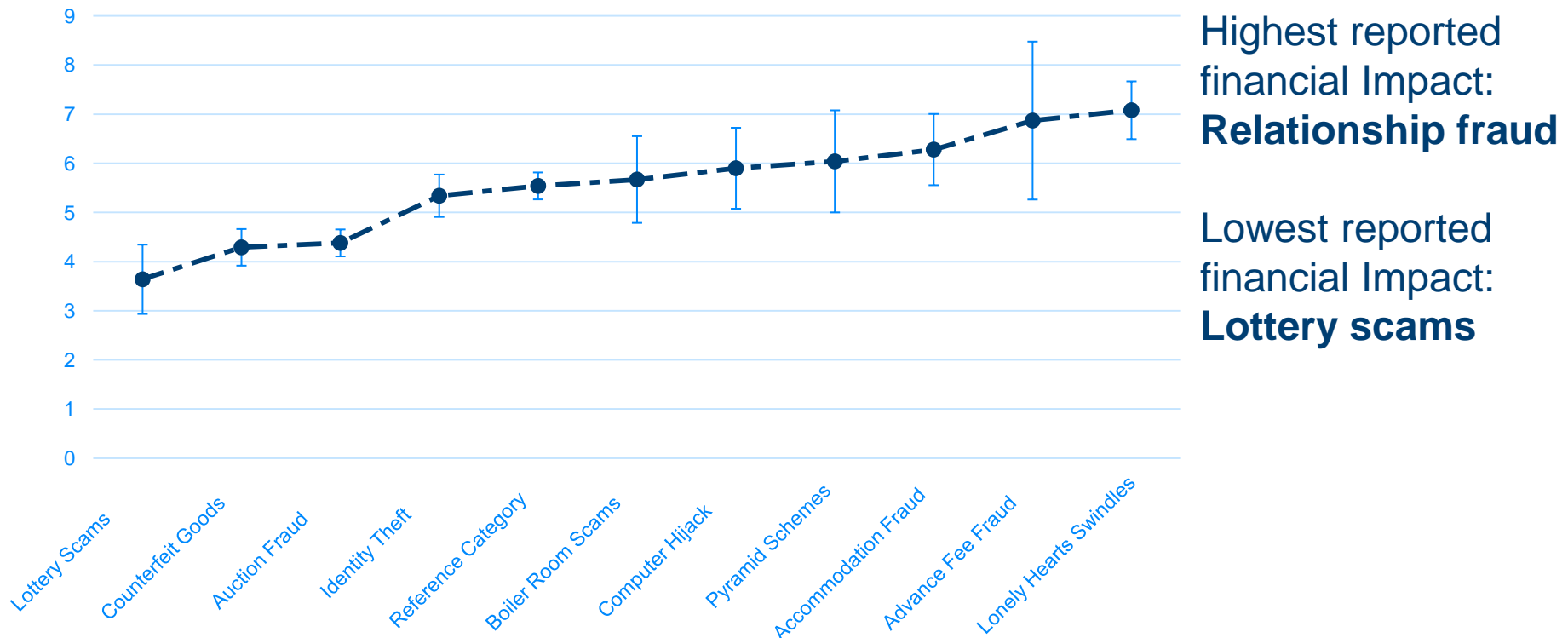
Lowest reported financial Impact:
Lottery fraud

Question (paraphrased): “Taking into account your monthly income at the time, please note how strongly the financial loss impacted you on a scale of 1 to 10.” Victims only. n = 1,366

Corollaries III.

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- *Emotional Impact*



Question (paraphrased): “Please rate the emotional impact of being scammed on a scale of 1 to 10, where 1 is not at all and 10 is high, lasting impact.” Victims only. n = 1,366

Corollaries I.

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- *Low frequency event.*
- Most scammers should not quit their day jobs.
- Low rate of success, but high impact.

